

## SUGGESTIONS FOR REMOVING ANIMAL HEADS FOR RABIES TESTING

**NOTE: Bats and small rodents should be submitted intact.**

Rabies testing laboratories in Virginia will only accept the heads or brains of animals except for small mammals such as bats, mice, squirrels, etc., which may be submitted whole (see Attachments 5 for laboratory instructions). All specimens should be accompanied by a laboratory submission form, either generated by VENIS or provided by the testing laboratory.

Preparation of heads or brains can be accomplished in several ways:

1. The local health department can contract with a veterinarian to remove brains or heads.
2. The animal can be delivered to a VDACS Regional Animal Health Laboratory for head removal.
3. Staff of the local health department or animal control agency can remove the head (see instructions below).

Submitting brains:

1. The brain may be preferable to the entire head when the size of the animal (e.g., livestock) makes transport difficult or when an owner does not want a pet decapitated.
2. Veterinarians can remove the brain and replace the skullcap so that a whole animal can be returned to the owner. The extra cost of this procedure should be borne by the owner.

When submitting the brain instead of the head, care should always be taken to insure that the brain stem is included.

### I. PURPOSE

- A. Submit a good specimen that will allow for accurate testing.
- B. Prevent human infection.

### II. SUPPLIES

- A. Sharp knife and sharpener.
- B. Optional - sharp hacksaw, dehorner, lopping shears, pruning shears, or brush cutters.

C. Protective clothing:

1. Waterproof gloves (preferably disposable).
2. Mask (disposable or launderable).
3. Safety glasses or goggles.
4. Coveralls and/or waterproof apron.

D. Cleaning Supplies

1. Detergent.
2. Disinfectant.
3. Paper towels.
4. Plastic trash bags.

III. PROCEDURE

A. Head Removal

**NOTE:** These methods are suggestions. Use the technique with which you are most familiar and feel most comfortable.

1. a. Lay animal on its back and extend the head by pushing top of nose toward ground or bend neck back over edge of table.
- b. Locate larynx (voice box). Immediately behind the larynx (see example that follows), using a sharp knife, make an incision through the skin and continue cutting down through the trachea and esophagus to the backbone.
- c. If you have cut in the correct place, you can identify the membrane covering the spinal cord between the first vertebrae (atlas) and the skull (occipital bone). The joint made by these two bones can be visualized and palpated as the animal's head is flexed and extended.
- d. The next step is to disarticulate the atlanto-occipital joint. It is possible to dissect the ligaments connecting this joint, but probably easier and faster to hyperextend the head and manually tear the ligaments. You will hear and feel a snap when this is accomplished.
- e. After disarticulation of the atlanto-occipital joint, the remaining muscle and skin can be cut with a knife to completely free the head from the body.

2. Some individuals may prefer to cut through the vertebra instead of disarticulating the joint. After cutting down to the backbone use shears or a hacksaw, to cut through the first vertebra. DO NOT use an axe, hatchet or power saw because of the danger created by flying debris.
- B. Packaging – see Rabies Laboratory Protocols, Attachments 5
- Each animal should be individually identified and packaged.
- C. Clean up
2. Instruments and contaminated surfaces should be washed with detergent and water, and disinfected with a virucidal solution such as clorox (100 ppm), alcohol (40-70% ethanol), iodine (25 ppm), or quaternary ammonium (200 ppm) compounds.
  3. The body of the animal should be incinerated. If this is not possible, it can be buried at a depth of at least 3 feet.

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